AARYAN PRAVEEN

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EDUCATION

Northeastern University *Master of Science in Software Engineering Systems*   May 2025

TECHNICAL SKILLS

Languages:	C++, Java, JavaScript/TypeScript, Python
Frameworks & Libraries:	ReactJS, Angular, NextJS, Redux, ExpressJS, Spring Boot, GraphQL, REST APIs, Vite, Webpack, Socket.IO, HTML/CSS (Sass)
Databases & Cloud:	MySQL, PostgreSQL, MongoDB (Mongoose), Azure, AWS (EC2, S3, Lambda, Auto Scaling Groups),Apache Tomcat, NGINX
DevOps & Tools:	Docker, Kubernetes, CI/CD (Jenkins, GitHub Actions), Git, Postman, Figma

EXPERIENCE

Northeastern University   Jan 2025 - May 2025
Research Assistant | View   *Boston, MA*

- Developed a TypeScript/React traffic simulation supporting 200+ vehicles across multiple lanes with configurable traffic rules (American/European) and vehicle types (cars, trucks, motorcycles).
- Increased analysis accuracy by developing a stabilized operating point algorithm that filters warm up noise using variance thresholding.
- Implemented complex traffic behavior algorithms including driver personality types, lane-changing logic, and pack formation detection, applying mathematical models to simulate realistic highway dynamics.
- Enabled persistent storage of simulation runs across sessions by building a serverless backend with Vercel Functions that interface with a MongoDB cluster.

Flair Labs   Oct 2021 - Apr 2023
Full Stack Software Engineer   *India*

- Created a Lit Elements-based UI library with 20+ modular components, integrated into a React KYC SaaS, enabling full white-label theming.
- Collaborated closely with the UI/UX team to design and refine the frontend component library, and authored clear documentation to support seamless integration and developer onboarding
- Strengthened app security by remediating 10+ known vulnerabilities (XSS, CSRF, SQL Injection) identified using Burp Suite and BSecure, and mitigated them through NGINX policies and server-side validation, resulting in a 90% drop in security incidents.
- Managed platform maintenance, implemented new features, and developed backend services using Java Spring Boot, creating and integrating RESTful APIs to improve functionality, user experience, and scalability.

PROJECTS

PoliSightsAI | *TFC Civic Tech Hackathon* | **GitHub**   Jan 2025 - Present

- Built an AI-powered policy tracker that automated retrieval of new regulatory updates using NLP classification, vector search, and retrieval-augmented generation (RAG).
- Developed a responsive frontend in React and TailwindCSS, enabling real-time visualization of tracked policies for civic tech users.
- Designed a prototype ETL pipeline with Airflow; integrated BeautifulSoup for scraping, OpenAI for embeddings, and Pinecone for vector storage, successfully deployed during the hackathon.

NimbleDev | *Self-Initiated Project* | **GitHub**   Jan 2025 - present

- Engineered an in-browser development sandbox with live previews, CLI interface, and tabbed multi-file support using WebSockets and session-aware state logic.
- Architected file tree with session-based state management; enabled cross-language support via dynamic rendering.

ACHIEVEMENTS

Best AI Solution | TFC Civic Tech Hackathon   Feb 2025
Recognized for designing an AI-powered policy tracking platform that leveraged NLP and semantic search for real-time regulatory insights.

Budding Star Award | Flair Labs   June 2023
Awarded for impactful work in full stack development, security hardening, and performance improvements.

Government of India Copyright | Mumbai University   April 2021
Earned Government of India Copyright for GPU-accelerated parallel computation research in MATLAB.